HOME HEALTH AGENCY QUALITY MEASURES: TECHNICAL DOCUMENTATION OF POTENTIALLY AVOIDABLE EVENT MEASURES

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CONTENTS

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INTRODUCTION

This document provides definitions of measures that appear in Home Health Agency Potentially Avoidable Event Reports, including detailed specifications for calculating these measures based on OASIS-D assessment data.

Quality Episodes of Care for OASIS Quality Measures

A quality episode of care is the unit of analysis for OASIS-based measures. This section provides the steps to construct a home health quality episode of care from OASIS assessments. The following fields are needed from each assessment to construct home health quality episodes of care:

- M0100_ASSMT_REASON: Reason for assessment

- FAC_INT_ID: Facility internal ID

- RES_INT_ID: Resident internal ID

- STATE_CD: State abbreviation

- EFCTV_DT: Effective date of the assessment[1]

- ASSESSMENT_ID: Unique identifier for each assessment

OASIS assessments are transmitted to the National Submissions Database residing on a secure database server maintained by CMS. Episodes of care are constructed by matching up assessments for each individual served by a home health agency, sorting those assessments by effective date, then pairing up assessments that mark the beginning and end of an episode of care. Episodes of care for which either the beginning or end assessment is missing, or for which assessments are out of sequence, are not included.

When working with assessment records from the National Submissions Database, the unique home health agency ID is a combination of the two position STATE_CD and FAC_INT_ID, and the unique patient ID is a combination of STATE_CD and RES_INT_ID.

The process of building episode-level records is as follows:

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[1] Effective date depends on the reason for assessment:
- If M0100_ASSMT_REASON = 01, effective date = M0030_START_CARE_DT.
- If M0100_ASSMT_REASON = 03, effective date = M0032_ROC_DATE.
- If M0100_ASSMT_REASON = 04 or 05, effective date = M0090_INFO_COMPLETET_DT.
- If M0100_ASSMT_REASON = 06, 07, 08, or 09, effective date = M0906_DC_TRAN_DTH_DT.

1. Keep only assessments related to start of care (SOC), resumption of care (ROC) after an inpatient facility stay, or end of care (EOC) discharge from home health care, including discharge due to death, or admission to inpatient facility for 24 hours or more:

    a. SOC: M0100_ASSMT_REASON = 01

    b. ROC: M0100_ASSMT_REASON = 03

    c. EOC: M0100_ASSMT_REASON = 06, 07, 08, or 09

2. Sort assessments by FAC_INT_ID, RES_INT_ID, STATE_CD in descending order based on EFCTV_DT (i.e., latest to earliest assessment).

3. For each set of assessments having the same combination of FAC_INT_ID, RES_INT_ID, STATE_CD, step through the assessments to find the latest assessment with M0100_ASSMT_REASON = 06, 07, 08, or 09.

4. If an assessment with M0100_ASSMT_REASON = 06, 07, 08, or 09 is found before an assessment with M0100_ASSMT_REASON = 01 or 03 is found, discard the episode being built and start over with step #3.

5. If no assessment with M0100_ASSMT_REASON = 01 or 03 is found before the assessments for this patient are exhausted, discard the episode being built.

6. When an assessment with M0100_ASSMT_REASON = 01 or 03 is found, the episode is complete.

7. Create an episode of care record with the following attributes:

    - FAC_INT_ID

    - RES_INT_ID

    - STATE_CD

    - ASSESSMENT_ID_1: Assessment ID of the SOC or ROC assessment

    - ASSESSMENT_ID_2: Assessment ID of the EOC assessment

    - EFCTV_DT_1: Effective date of the SOC or ROC assessment

    - EFCTV_DT_2: Effective date of the EOC assessment

Home Health Potentially Avoidable Event Measures

Measures are referred to as follows:

Measure Domain & Descriptive Measure Name	Short Measure Name
Emergent Care for Potentially Avoidable Cause	
Emergent Care for Improper Medication Administration or Medication Side Effects	ED_Use_Medications
Emergent Care for Hypo/Hyperglycemia	ED_Use_Blood_Sugar
Discharged with New, Worsening, or Unresolved Health Problem	
Development of Urinary Tract Infection	New_UTI
Increase in Number of Pressure Ulcers	More_Pressure_Ulcers
Substantial Decline in 3 or more Activities of Daily Living	ADL_Decline
Substantial Decline in Management of Oral Medications	Oral_Med_Decline
Discharged to the Community with an Unhealed Stage II Pressure Ulcer	DC_w_Stg_II_Press_Ulc
Discharged with Unmet Needs	
Discharged to the Community Needing Wound Care or Medication Assistance	DC_Need _Wound_Care
Discharged to the Community Needing Toileting Assistance	DC_Need _Toilet_Assist
Discharged to the Community with Behavioral Problems	DC_Behavior_Problem

Assumptions and Conventions

The following transformations result in measures with numeric values. For process and outcome measures, including potentially avoidable event measures, "1" indicates that the outcome event occurred or the process was followed, while "0" indicates the outcome event did not occur or the process was not followed. When the instructions indicate that a measure is to be set to "MISSING", the case is excluded from analysis for that particular measure, either because the measure is not applicable or because a data item on which that measure is based has been indicated as "unknown".

OASIS data items are referred to in this documentation using field names specified in OASIS Data Submission Specifications published by CMS. "[1]" is appended to the field name if the value is taken from the beginning of episode assessment (Start or Resumption of Care), and "[2]" is appended if the value is to be taken from the assessment conducted at the end of the episode (Discharge, Transfer, or Death). The

expression VALUE(FieldName) indicates conversion of a one or two character text field to a numeric value. The expression DATEVALUE(FieldName) indicates conversion of an eight character text field to a numeric value representing a date (number of days since 12/31/1899). Starting with OASIS D, dash '-' may be used as a response for certain items.

Data Transformation Pseudo-code

Emergent Care for Potentially Avoidable Cause

Emergent Care for Improper Medication Administration or Medication Side Effects
IF M2310_ECR_MEDICATION[2] = 1
THEN
    ED_USE_MEDICATIONS = 1
ELSEIF M2301_EMER_USE_AFTR_LAST_ASMT[2] = 00 **OR**
((M2301_EMER_USE_AFTR_LAST_ASMT[2] =01 **OR**
M2301_EMER_USE_AFTR_LAST_ASMT[2] =02) **AND**
M2310_ECR_UNKNOWN[2] = 0)
THEN
    ED_USE_MEDICATIONS = 0
ELSE
    ED_USE_MEDICATIONS = MISSING
END IF

Emergent Care for Hypo/Hyperglycemia
IF M2310_ECR_HYPOGLYC[2] = 1
THEN
    ED_USE_BLOOD_SUGAR = 1
ELSEIF M2301_EMER_USE_AFTR_LAST_ASMT[2] = 00 **OR**
    ((M2301_EMER_USE_AFTR_LAST_ASMT[2] =01 **OR**
    M2301_EMER_USE_AFTR_LAST_ASMT[2] =02) **AND**
    M2310_ECR_UNKNOWN[2] = 0)
THEN
    ED_USE_BLOOD_SUGAR = 0
ELSE
    ED_USE_BLOOD_SUGAR = MISSING
END IF

Discharged with New, Worsening, or Unresolved Health Problem

Development of Urinary Tract Infection
IF M0100_ASSMT_REASON[2] = 09
THEN
    IF M1600_UTI[1] = 00 AND M1600_UTI[2] = 01
    THEN
        NEW_UTI = 1
    ELSEIF M1600_UTI[1] = 00 AND M1600_UTI[2] = 00
    THEN
        NEW_UTI = 0

ELSE

    NEW_UTI = MISSING

END IF

ELSE

    NEW_UTI = MISSING

END IF

Increase in Number of Pressure Ulcers

IF M0100_ASSMT_REASON[2] = 09

THEN

    IF M1306_UNHLD_STG2_PRSR_ULCR[2] = 1

    THEN

        IF M1306_UNHLD_STG2_PRSR_ULCR[1] = 0

        THEN

            More_Pressure_Ulcers = 1

        ELSEIF (VALUE(M13011_NBR_PRSULC_STG2[1]) +

            VALUE(M13011_NBR_PRSULC_STG3[1])+

            VALUE(M1311_NBR_PRSULC_STG4[1])+

            VALUE(M1311_NSTG_DRSG[1]) +

            VALUE(M1311_NSTG_CVRG[1]) +

            VALUE(M1311_NSTG_DEEP_TISUE[1])) <

            (VALUE(M1311_NBR_PRSULC_STG2[2]) +

            VALUE(M1311_NBR_PRSULC_STG3[2]) +

            VALUE(M1311_NBR_PRSULC_STG4[2]) +

            VALUE(M1311_NSTG_DRSG[2]) +

            VALUE(M1311_NSTG_CVRG[2]) +

            VALUE(M1311_NSTG_DEEP_TISUE[2]))

        THEN

            More_Pressure_Ulcers = 1

        ELSE

            More_Pressure_Ulcers = 0

        END IF

    ELSE

        More_Pressure_Ulcers = 0

    END IF

ELSE

    More_Pressure_Ulcers = MISSING

END IF

Substantial Decline in 3 or more Activities of Daily Living

ADL_Temp1 = 0

IF M1800_CRNT_GROOMING[1] = 03 **OR** M1800_CRNT_GROOMING[1] = 02

THEN

ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1830_CRNT_BATHG[1] = 06 **OR** M1830_CRNT_BATHG[1] = 05
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1840_CRNT_TOILTG[1] = 04 **OR** M1840_CRNT_TOILTG[1] = 03
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1845_CRNT_TOILTG_HYGN[1] = 03 **OR** M1845_CRNT_TOILTG_HYGN[1] = 02
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1850_CRNT_TRNSFRNG[1] = 05 **OR** M1850_CRNT_TRNSFRNG[1] = 04
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1860_CRNT_AMBLTN[1] = 06 **OR** M1860_CRNT_AMBLTN[1] = 05
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M1870_CRNT_FEEDING[1] = 05 **OR** M1870_CRNT_FEEDING[1] = 04
THEN
ADL_Temp1 = ADL_Temp1 + 1
END IF
IF M0100_ASSMT_REASON[2] = 09 **AND** ADL_Temp1 <5
THEN
ADL_Temp2 = 0
IF VALUE(M1800_CRNT_GROOMING[2]) > VALUE(M1800_CRNT_GROOMING[1]) + 1
THEN
ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1830_CRNT_BATHG[2]) > VALUE(M1830_CRNT_BATHG[1]) + 1
THEN
ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1840_CRNT_TOILTG[2]) > VALUE(M1840_CRNT_TOILTG[1]) + 1
THEN
ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1845_CRNT_TOILTG_HYGN[2]) >
VALUE(M1845_CRNT_TOILTG_HYGN[1]) + 1

THEN
    ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1850_CRNT_TRNSFRNG[2]) > VALUE(M1850_CRNT_TRNSFRNG[1]) + 1
THEN
    ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1860_CRNT_AMBLTN[2]) > VALUE(M1860_CRNT_AMBLTN[1]) + 1
THEN
    ADL_Temp2 = ADL_Temp2 + 1
END IF
IF VALUE(M1870_CRNT_FEEDING[2]) > VALUE(M1870_CRNT_FEEDING[1]) + 1
THEN
    ADL_Temp2 = ADL_Temp2 + 1
END IF
IF ADL_Temp2 >= 3
THEN
    ADL_Decline = 1
ELSE
    ADL_Decline = 0
END IF
ELSE
    ADL_Decline = MISSING
END IF

Substantial Decline in Management of Oral Medications
IF M0100_ASSMT_REASON[2] <> 09 **OR**
    M2020_CRNT_MGMT_ORAL_MDCTN[2] = NA **OR**
    M2001_DRUG_RGMN_RVW[1] = 9 **OR**
    M2020_CRNT_MGMT_ORAL_MDCTN[1] <> 00
THEN
    Oral_Med_Decline = MISSING
ELSE
    IF M2020_CRNT_MGMT_ORAL_MDCTN[2] = 03 **AND**
        M2020_CRNT_MGMT_ORAL_MDCTN[1] = 00
    THEN
        Oral_Med_Decline = 1
    ELSE
        Oral_Med_Decline = 0
    END IF
END IF

Discharged to the Community with an Unhealed Stage II Pressure Ulcer
IF M0100_ASSMT_REASON[2] = 09

THEN

    IF M2420_DSCHRG_DISP[2] = 01 **AND**

        (M1306_UNHLD_STG2_PRSR_ULCR[2] = 1 **AND**

        ((M1307_OLDST_STG2_AT_DSCHRG[2] = 02 **AND**

        DATEVALUE(M0906_DC_TRAN_DTH_DT[2]) –

        DATEVALUE(M1307_OLDST_STG2_ONST_DT[2]) > 30) **OR**

        (M1307_OLDST_STG2_AT_DSCHRG[2] = 01 **AND**

        M0100_ASSMT_REASON[1] = 01 **AND**

        DATEVALUE(M0906_DC_TRAN_DTH_DT[2]) –

        DATEVALUE(M0030_START_CARE_DT[1]) > 30) **OR**

        (M1307_OLDST_STG2_AT_DSCHRG[2] = 01 **AND**

        M0100_ASSMT_REASON[1] = 03 **AND**

        DATEVALUE(M0906_DC_TRAN_DTH_DT[2]) –

        DATEVALUE(M0032_ROC_DT[1]) > 30)

    THEN

        DC_w_Stg_II_Press_Ulc = 1

    ELSE

        DC_w_Stg_II_Press_Ulc = 0

    END IF

ELSE

    DC_w_Stg_II_Press_Ulc = MISSING

END IF

Discharged with Unmet Needs

Discharged to the Community Needing Wound Care or Medication Assistance

IF M0100_ASSMT_REASON[2] = 09

THEN

    IF M2420_DSCHRG_DISP[2] = 01 **AND** (VALUE(M2102_CARE_TYPE_SRC_MDCTN[2])

        > 2 **OR** VALUE(M2102_CARE_TYPE_SRC_PRCDR[2]) > 2) **AND**

        (M1710_WHEN_CONFUSED[2] = NA **OR** VALUE(M1710_WHEN_CONFUSED[2] >

        2) AND (M1324_STG_PRBLM_ULCER[2] = 03 O**R**

        M1324_STG_PRBLM_ULCER[2]= 04 **OR** M1334_STUS_PRBLM_STAS_ULCR[2] = 03

        OR M1342_STUS_PRBLM_SRGCL_WND[2] = 03 **OR**

        M2020_CRNT_MGMT_ORAL_MDCTN[2] = 03)

    THEN

        DC_Need _Wound_Care = 1

    ELSE

        DC_Need _Wound_Care = 0

    END IF

ELSE

    DC_Need _Wound_Care = MISSING

END IF

Discharge to the Community Needing Toileting Assistance

IF M0100_ASSMT_REASON[2] = 09

THEN

    IF M2420_DSCHRG_DISP[2] = 01 **AND** (VALUE(M2102_CARE_TYPE_SRC_ADL[2]) > 2)

        AND (VALUE(M1840_CRNT_TOILTG[2]) = 4 **OR**

        VALUE(M1845_CRNT_TOILTG_HYGN[2] = 3))

    THEN

        DC_Need _Toilet_Assist = 1

    ELSE

        DC_Need _Toilet_Assist = 0

    END IF

ELSE

    DC_Need _Toilet_Assist = MISSING

END IF

Discharge to the Community with Behavioral Problems

IF M0100_ASSMT_REASON[2] = 09

THEN

IF M2420_DSCHRG_DISP[2] = 01 **AND**

    VALUE(M2102_CARE_TYPE_SRC_SPRVSN[2]) > 2 **AND**

    (VALUE(M1740_BD_MEM_DEFICIT[2]) +

    VALUE(M1740_BD_IMP_DECISN[2]) +

    VALUE(M1740_BD_VERBAL[2]) +

    VALUE(M1740_BD_PHYSICAL[2]) +

    VALUE(M1740_BD_SOC_INAPPRO[2]) +

    VALUE(M1740_BD_DELUSIONS[2])) > 1

    THEN

        DC_Behavior_Problem = 1

    ELSE

        DC_Behavior_Problem = 0

    END IF

ELSE

    DC_Behavior_Problem = MISSING

END IF